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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,199	05/04/2006	Hidetoshi Nishihara	2006_0663A	8489

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EXAMINER	
MYERS, JESSICA L	
ART UNIT	**PAPER NUMBER**
3746	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,199	NISHIHARA, HIDETOSHI	
	Examiner	Art Unit	
	JESSICA L. MYERS	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5/4/2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 May 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/4/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 16 states that the electric motor is driven at operation frequencies lower than the power source frequency. It is unclear how this would be done, since the specification

does not describe the power source or its operating frequency, or how the motor would operate at a different frequency than the power source. Furthermore, it is unclear how the operating frequency of the motor and the power source are measured, whether it be RPM or in electrical Hertz, and whether similar units are used for both.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9, 10, 11, 13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,182,901 to Solomon (Solomon).

In Reference to Claim 9

Solomon teaches a compressor comprising:

a hermetic container storing oil therein (shell (11));

an electric motor (13) contained in said hermetic container and including a stator (18) and a rotor (23);

a compressor unit (12) linked to be driven by said electric motor, said compressor unit including a shaft that extends in a vertical direction (shaft (22)) and is rotated by said electric motor; and

an oil pump which is formed at a lower end of said shaft and immersed in the oil (see figures 1 and 2),

wherein said oil pump includes a helical groove (spiral groove (38)) provided in an outer periphery of said shaft, a cup-shaped sleeve (bearing (21) is shaped like a cup) rotatably mounted on the lower end of said shaft so as to cover said helical groove with a predetermined clearance defined between said shaft and said sleeve, and a rotation-suppressing element for suppressing rotation of said sleeve (frame (14) prevents the bearing from rotating with the shaft).

In Reference to Claim 10

Solomon teaches a compressor in accordance with claim 9 (see the rejection of claim 9 above), wherein said rotation-suppressing element comprises a bracket secured with said stator to fix said sleeve to said stator (the frame (14) serves as a bracket to connect to the sleeve to the stator).

In Reference to Claim 11

Solomon teaches a compressor in accordance with claim 9 (see the rejection of claim 9 above), wherein said rotation-suppressing element comprises a wing formed on an outer periphery of said sleeve to generate a viscous resistance with respect to the oil. The oil pump of Solomon also has a fans means (50), see figures 5 and 6, with blades (56) that are arranged around the outer periphery of the bearing sleeve (21). These blades act as wings that act as stirrers for the oil and generate a resistance force with the oil as they stir it.

In Reference to Claim 13

Solomon teaches a compressor in accordance with claim 9 (see the rejection of claim 9 above), wherein said compressor unit further comprises a shaft support for

rotatably supporting said shaft (upper bearing (19)), said shaft having a vertical hole defined therein (passage (31)) so as to extend in a vertical direction thereof, said vertical hole communicating an upper end of said helical groove with a clearance between said shaft and said shaft support (see figures 1 and 2, where the passage allows oil to be pumped to lubricate the upper bearing).

In Reference to Claim 15

Solomon teaches a compressor in accordance with claim 9 (see the rejection of claim 9 above), wherein said compressor trait is supported elastically in said hermetic container (The compressor is supported by springs (27) and lugs (28 and 29) in an elastic manner inside the shell).

6. Claims 9 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT Publication WO 93/22557 to Krueger et al. (Krueger et al.).

In Reference to Claim 9

Krueger et al. teach a compressor comprising:

a hermetic container storing oil therein (hermetic shell (1));

an electric motor contained in said hermetic container and including a stator and a rotor (motor (6), see figure 3);

a compressor unit linked to be driven by said electric motor, said compressor unit including a shaft that extends in a vertical direction and is rotated by said electric motor (eccentric shaft (5) shown in figure 1 is used to drive a compressor); and

an oil pump which is formed at a lower end of said shaft and immersed in the oil (see figure 4a),

wherein said oil pump includes a helical groove (22) provided in an outer periphery of said shaft, a cup-shaped sleeve (30) rotatably mounted on the lower end of said shaft so as to cover said helical groove with a predetermined clearance defined between said shaft and said sleeve, and a rotation- suppressing element for suppressing rotation of said sleeve (arm and tooth (50)).

In Reference to Claim 16

Krueger et al. teach a compressor in accordance with claim 9 (see the rejection of claim 9 above), wherein said electric motor is driven at operation frequencies including a frequency lower than a power source frequency. Krueger et al. teach that the motor of the compressor needs to be operated at a speed between 15 and 100 Hz, which includes frequencies less than the standard available utility power, which operates at 50 Hz (see pages 3-5, lines 16-8).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solomon in view of U.S. Patent 6,484,847 to Paczuski (Paczuski).

In Reference to Claim 12

Solomon teaches a compressor in accordance with claim 9 (see the rejection of claim 9 above), but do not teach the use of a magnetic element in the compressor.

Paczuski teaches another compressor apparatus with an oil sump pump supported at the base of the operating shaft, where the sleeve (109) of the oil pump includes a magnetic disk (84) which prevents ferrous particles from entering the oil pump. It would have been obvious to one of ordinary skill in the art at the time of invention to include a magnetic trap in the sleeve of Solomon as taught by Paczuski in order to prevent magnetic particles from entering the oil pump. When the apparatus of Solomon is so modified, the rotation-suppressing sleeve would have a permanent magnet secured to it, and ferrous particles supported in the hermetic container would be attracted to the magnetic force of said permanent magnet.

In Reference to Claim 14

Solomon teaches a compressor in accordance with claim 9 (see the rejection of claim 9 above), but does not teach that the sleeve is formed of a synthetic resin.

Paczuski teaches another compressor apparatus with an oil sump pump supported at the base of the operating shaft, where the sleeve (109) of the oil pump is made from an abrasion resistant moldable plastic (see column 5 lines 34-38). It would have been obvious to one of ordinary skill in the art at the time of invention to form the sleeve of Solomon out of plastic as taught by Paczuski since it would have been obvious to vary the materials that the device is made from, and since plastic is abrasion and corrosion resistant.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 3,454,213 to Valbjorn, 6,716,001 to Kim, and 6,450,785 to Delby et al. teach similar compressor apparatuses.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA L. MYERS whose telephone number is (571)270-5059. The examiner can normally be reached on Monday through Friday, 8:30am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles G Freay/
Primary Examiner, Art Unit 3746

/JLM